What is Perfusion Index in a Pulse Oximeter?

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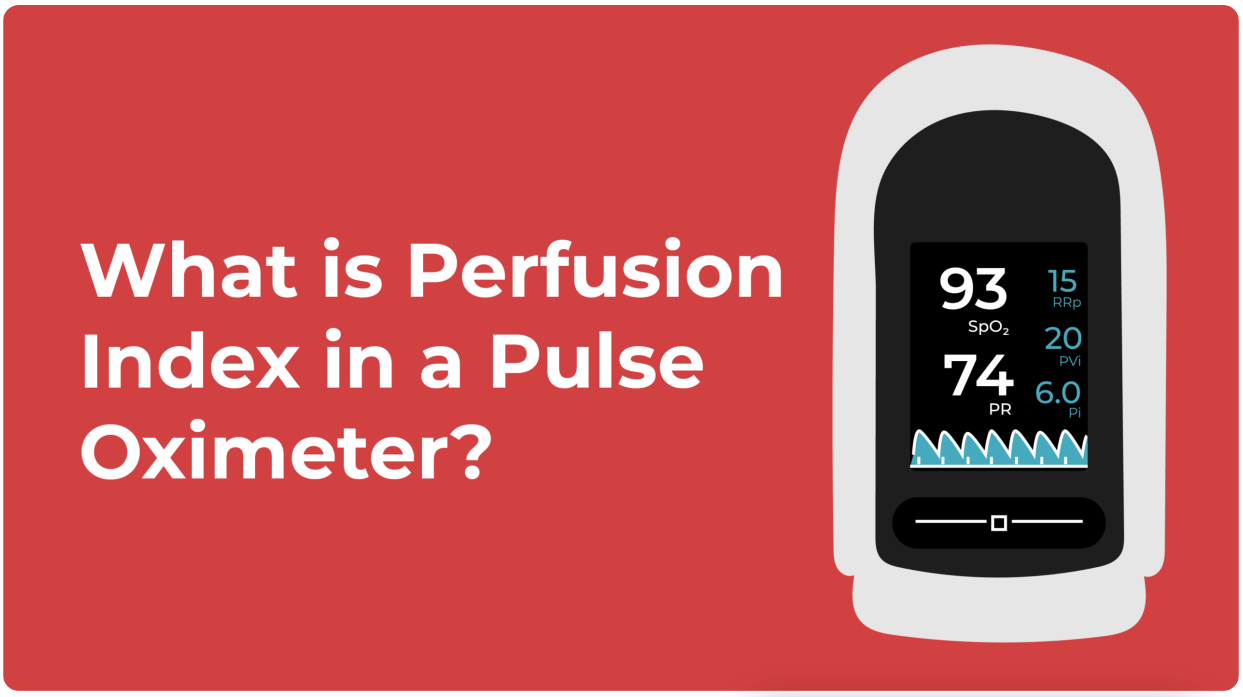

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What is a Pulse Oximeter?

A **pulse oximeter** is a small electronic device that measures **heart rate and oxygen saturation.** Oxygen saturation shows **how effectively blood carries oxygen throughout the body.** Pulse oximeters are most commonly clipped to the **index or middle finger of either hand.** Alternative placements may include the **nose, earlobe, or toes.** Furthermore, these devices are commonly found in **critical care environments, office settings,** and **at home.**

Parameter	Reading Indication	Parameter Indication	Normal Adult Range
SpO2	Blood Oxygen	Oxygen Saturation is the fraction of oxygen-saturated hemoglobin relative to total hemoglobin in the blood.	94-100
PR	Pulse Rate	Pulse Rate is measured by the number of contractions in the heart per minute.	60-125
PI	Perfusion Index	The PI is useful for quickly evaluating the appropriateness of the monitoring site for pulse oximetery.	0.2%-20%

Additionally, pulse oximeters can record **perfusion index (PI).** To clarify, we'll cover what PI measures, as well as its normal range and clinical applications.

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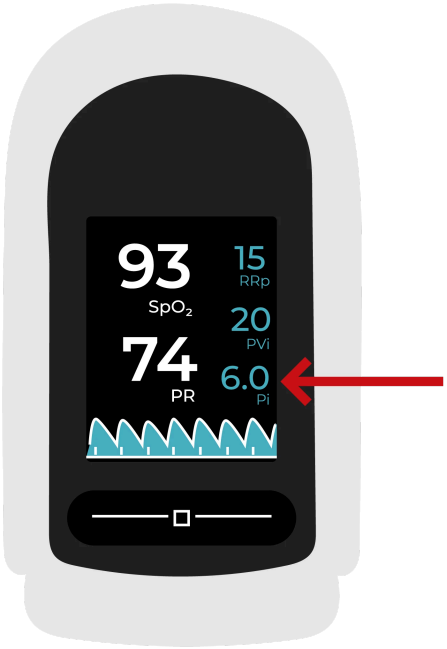

What is the Perfusion Index?

Perfusion index is the **ratio of pulsing to non-pulsing blood.** In other words, perfusion status is a good indicator of a **user's pulse strength or blood flow.**

What is the Normal Perfusion Index Range?

The normal perfusion index (PI) ranges from **0.02% to 20%.** However, **there is no standard "normal value"**. Users should find their **initial value** and **track changes over time.** Poor perfusion can be the result of **artery disease, diabetes, obesity, blood clots,** or **other medical conditions.**

PI Percentage

- **A higher PI (closer to 20%)** represents **dilation of the arteries** or a **strong blood flow.**
- **A lower PI (closer 0.02%)** represents **constriction of the arteries** or a **weak blood flow.**

Clinical Applications of Perfusion Index

Generally, professional settings use PI to gau[illegible] **various medications** or **to track disease pro**[illegible] include:

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Anesthesia Onset Indicator

Pain Indicator

Optimal Site for Pulse Oximetry

Conclusion

Perfusion index is a non-invasive measure of a user's pulse strength and has a wide range of clinical applications. Additionally, PI is a relative number and varies rom patient to patient. If you're looking for an accurate and reliable pulse oximeter, **click here** to view our catalog.

Citations

https://www.healthline.com/health/pulse-oximetry#purpose-and-uses

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